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Titan explosion seen as blow to intelligence

Reported loss of spy satellite could also impede arms control

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The explosion of a Titan rocket believed carrying a secret spy satellite appears to have dealt a serious blow to US monitoring capability. It could also have a major impact on arms-control process.

Although Air Force officials will only say the payload lost late last week was secret, aerospace experts believe it was a KH-11 photo-reconnaissance satellite. When US intelligence officials keep tabs on Soviet military maneuverings, they rely heavily on the KH-11.

The KH-11 is equipped with powerful cameras that send back photographs giving details of everything from Soviet troop movements to aircraft strength to nuclear missile inventories.

"The KH-11," says one aerospace analyst, "is the workhorse of US spy satellites."

Now, however, the US may be facing a blind spot in its "eye-in-the-sky" capability that could have national security implications. The US now has only one such satellite in orbit. It was launched in December 1984, and, with a life expectancy of only two to three years, may only last another year or so.

"You just can't exaggerate the importance of photo-reconnaissance to US intelligence gathering," says Dr. Paul Stares, a military-space expert at the Brookings Institution in Washington. "There must be a lot of nervous people at the Pentagon right now."

Lofting a similar satellite quickly appears difficult. Titan launches from the missile test center at Vandenberg Air Force Base near here will be halted until the cause of the explosion is known, says Air Force Capt. Rick Sanford, a base spokesman.

The only other US launch vehicle capable of carrying such a large payload — the space shuttle — is already grounded because of the destruction of Challenger last January.

"It is more serious than just affecting the military," says one aerospace expert who requested anonymity, noting the importance of photo-reconnaissance satellites in verifying compliance with arms-control treaties. "It imperils the entire arms-control process."

The Titan 34D was destroyed in a fiery explosion a few seconds after liftoff at Vandenberg's Launch Complex Four, about 130 miles northwest of Los Angeles. There were no serious injuries and damage was said to be limited to the launch complex itself. An investigation into the cause of the accident — not expected to be known for some time — began over the weekend.

The explosion marked the second straight failure of a Titan 34D, after seven successful launches. Last August, a Titan blew up about two minutes after liftoff from Vandenberg. The failure was blamed on the premature shutdown of one of the rocket's two first stage engines.

The destruction of the latest Titan marks a serious setback for the nation's ability to put heavy satellites and other payloads into space. The 34D is the powerhouse of unmanned launch systems, capable of carrying a large truck into orbit.

Last year, the shuttles and Titans accounted for two-thirds of the nation's satellite launches. Lighter rockets accounted for the rest. A new, unmanned rocket capable of lifting heavy payloads is not expected to be ready for launch until late 1988.

For the military, however, the most immediate concern appears to be what damage might have been done to US intelligence gathering capabilities.

KH-11 satellites operate in low-earth orbit and can be maneuvered to monitor specific areas of the earth.

They are considered valuable in keeping tabs on such things as troop movements and turbulence in the Middle East. Much of their time is believed to be spent looking in on the Soviets, since the US can't use another key source of intelligence-gathering, photo-reconnaissance from aircraft. The US won't violate Soviet airspace.

The US has other means of monitoring the Soviets from space. This includes picking up signals with early-warning and electronic surveillance satellites.

But the KH-11 satellites have a few trump cards. They take photos and beam them to ground stations instantly. The US, experts say, have "close look" satellites that are sent up for short periods of time, mainly to monitor crises. These usually don't send back images instantly but drop film for mid-air interception by specially equipped planes.

The KH-11s are also considered valuable in monitoring the production and deployment of nuclear missiles and verifying arms-control treaties. The US usually has two of the big satellites operating at any given time. With only one on orbit now, it leaves the US in a precarious position.

"Our total strategic photo reconnaissance is hanging on one satellite," says Curtis Peebles, an aerospace analyst who has written widely on military-space issues.

Some experts say the shuttle is the only vehicle that can launch the next photo-reconnaissance satellite in the series, the KH-12. So, with the shuttle program grounded, it could be a long time before it sees duty.

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